

ABSTRACT OF THE DISCLOSURE

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3 A method for obtaining seismic data is disclosed. A constellation of seismic
4 energy sources is translated along a survey path. The seismic energy
5 sources include a reference energy source and a satellite energy source. The
6 reference energy source is activated and the satellite energy source is
7 activated at a time delay relative to the activation of the reference energy
8 source. This is repeated at each of the spaced apart activation locations
9 along the survey path to generate a series of superposed wavefields. The
10 time delay is varied between each of the spaced apart activation locations.
11 Seismic data processing comprises sorting the traces into a common-
12 geometry domain and replicating the traces into multiple datasets associated
13 with each particular energy source. Each trace is time adjusted in each
14 replicated dataset in the common-geometry domain using the time delays
15 associated with each particular source. This result in signals generated from
16 that particular energy source being generally coherent while rendering signals
17 from the other energy source is generally incoherent. The coherent and
18 incoherent signals are then filtered to attenuate incoherent signals.